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FORECAST DIVISION.

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RIVERS AND FLOODS.

Two new river forecast districts were created during the year, thereby increasing the total number of districts to 50. On May 1 the district of Phoenix, Ariz., was created, with territory comprising the watershed of the Gila River, formerly a portion of the Denver, Colo., district; and on September 1 the district of Binghamton, N. Y., was created by detaching that portion of the district of Harrisburg, Pa., at and above Binghamton. Several new stations were opened in each of the new districts. A detailed statement of changes during the year follows:

RIVER STATIONS ESTABLISHED.

Station.	*District.*
Bainbridge, N. Y.	Binghamton, N. Y.
*Boonford, N. C.	Knoxville, Tenn.
*Chillicothe, Ohio	Columbus, Ohio.
*Cortland, N. Y.	Binghamton, N. Y.
*Coshocton, Ohio	Columbus, Ohio.
Elgin, Utah	Denver, Colo.
Ferguson, S. C.	Columbia, S. C.
*Fort Wayne, Ind.	Columbus, Ohio.
Fruita, Colo.	Denver, Colo.
Grand Canyon, Ariz.	Denver, Colo.
*Maricopa, Phoenix, and Salt River Valley railroad bridge over Salt River, Ariz.	Phoenix, Ariz.
†Marble Falls, Tex.	Galveston, Tex.
*New Berlin, N. Y.	Binghamton, N. Y.
New Castle, Colo.	Denver, Colo.
*Oneonta, N. Y.	Binghamton, N. Y.
*Rogers, Ind.	Cairo, Ill.
†Running Water, S. Dak.	Sioux City, Iowa.
Sherburne, N. Y.	Binghamton, N. Y.
*Tempe, Ariz.	Phoenix, Ariz.
Thurman, N. Y.	Albany, N. Y.
Topock (P. O. Mellen), Ariz.	Denver, Colo.
Vancouver, Wash.	Portland, Oreg.

At the following stations where occasional observations only were taken heretofore, regular daily observations will be taken for at least a portion of each year:

Station.	*District.*
Harrisburg, Oreg.	Portland, Oreg.
Jefferson, Oreg.	Portland, Oreg.
McMinnville, Oreg.	Portland, Oreg.
Merrill, Iowa	Sioux City, Iowa.
Pasco, Wash. (Columbia River)	Portland, Oreg.
Williamson, W. Va.	Cincinnati, Ohio.

The rainfall station at Pikeville, Ky., Cincinnati, Ohio, district, was discontinued, and a river station established at the same place.

RIVER STATIONS DISCONTINUED.

Station.	*District.*
Edisto, S. C.	Columbia, S. C.
Jackson, Ky.	Louisville, Ky.
*Redding, Cal.	Sacramento, Cal.
‡Riparia, Wash.	Portland, Oreg.
St. Stephens, S. C.	Columbia, S. C.
Schaghticoke, N. Y.	Albany, N. Y.
*Sherwood, Ohio	Columbus, Ohio.
*Waldo, N. Mex.	Denver, Colo.
Warrensburg, N. Y.	Albany, N. Y.

RAINFALL STATIONS ESTABLISHED.

Station.	*District.*
*Bangorville, Ohio	Columbus, Ohio.
*Benson, Ariz.	Phoenix, Ariz.
*Cooperstown, N. Y.	Binghamton, N. Y.
*De Ruyter, N. Y.	Binghamton, N. Y.
*Jerome, Ariz.	Phoenix, Ariz.
*Montpelier, Ohio	Columbus, Ohio.
*Newcastle, Va.	Richmond, Va.
*Norwich, N. Y.	Binghamton, N. Y.
*Rockfish, Va.	Richmond, Va.
*San Carlos, Ariz.	Phoenix, Ariz.
*Seligman, Ariz.	Phoenix, Ariz.
Spartanburg, Ariz.	Columbia, S. C.
*Wooster, Ohio	Columbus, Ohio.

RAINFALL STATIONS DISCONTINUED.

Station.	*District.*
Burkeville, Ala.	Montgomery, Ala.
Enoree, S. C.	Columbia, S. C.
*Mansfield, Ohio	Columbus, Ohio.
*Maxwell City, N. Mex.	Denver, Colo.
*Olden, Mo.	Little Rock, Ark.

The highest and lowest stages, together with the annual ranges at 201 selected stations, are shown in Table V.—*H. C. Frankenfield, Professor of Meteorology.*

*Occasional reports only. †Beginning January 1, 1908. ‡To be reopened February 1, 1908.

GENERAL CLIMATIC CONDITIONS.

By Mr. P. C. DAY, Assistant Chief, Division of Meteorological Records.

PRESSURE.

The distribution of the mean sea-level pressure during 1907 over the United States and Canada is graphically shown on Chart VI, and the average values and departures from the normal are shown for each station in Tables I and IV.

The variations from the normal pressure distribution during the several months of the year were not sufficient to produce any marked departure from the normal annual distribution, and variations from the latter were not pronounced in any district.

The annual average pressure was slightly below normal over the eastern districts of Canada, New England, the lower Lake region, and Middle Atlantic States, and also over the Pacific coast districts from central California northward. Over the remaining districts of the United States and Canada pressure averaged slightly higher than usual. The maximum departure, +.05 to +.07 inch, occurred over eastern Montana and the western portions of North Dakota and South Dakota.

Average pressure of 30.05 inches, or slightly higher, was maintained over the Ohio Valley, south Atlantic and east Gulf districts, and locally in the upper Missouri Valley and along the coast of northern California.

Over portions of New Mexico, Arizona, and southeastern California the annual pressure averaged about 29.90 inches.

TEMPERATURE.

The mean annual temperature over the various portions of the United States did not differ widely from the normal distribution, but an analysis of the various seasons making up the yearly record shows many abnormal features.

The most notable of the wide fluctuations in the seasonal temperature were the extreme warmth of the latter part of March over the districts east of the Rocky Mountains, and the continued cold attending the progress of the later spring and early summer months over the greater part of the same districts.

Details of the above, with other important temperature variations, appear in the summary of the weather during the respective months.

Temperature was below the normal during the greater part of the year over all northern districts of the United States and also over the whole of Canada, except portions of British Columbia. The total deficiency, however, was generally less than 2°. Over the southern portions of the United States there was a corresponding excess, which prevailed by small amounts during most of the months of the year.

Within the United States proper the extremes of temperature were not beyond the limits of former years. Maximum temperatures from 120° to 124° occurred in portions of southern Arizona and southeastern California, and minimum temperatures from 50° to 52° below zero were reported from the northern portions of Minnesota and Wisconsin.

A minimum temperature of 58° below zero was recorded at White River, Ontario, Canada, and the same temperature was reported from Dawson, in the Yukon district, while in the interior of Alaska temperatures as low as —66° were recorded.

The annual range of temperature varied from 35° at Key West, in southern Florida, to 147° at Williston, in the northern portion of North Dakota.

PRECIPITATION.

The distribution of precipitation during the year is graphically shown on Chart IV, and the variations from the average are shown on Chart XI.

In general the precipitation for the year was above the normal in the central portions of the Middle Atlantic States, portions of the Lake region, the Ohio and middle Mississippi valleys, the central Gulf States, and in the Rocky Mountain and Plateau districts, and portions of western Oregon and northern California.

Over the south Atlantic coast, the southern Appalachian region, Florida Peninsula, the west Gulf States, the Great Plains from Texas to the northern boundary, portions of the Lake region, and along the north Pacific coast there was a general and well-marked deficiency in the annual precipitation.

Along the immediate Atlantic coast from Chesapeake Bay to Florida, and over eastern Texas and the western portions of Louisiana and Arkansas, the deficiency ranged from about 5 to more than 20 inches.

The general distribution of precipitation during the various seasons of the year was such that except over small areas there was no important interest that suffered materially from either excess or deficiency of moisture.

The distribution of thunderstorms over the United States and Canada is graphically presented on Chart X, the marked feature of which is the uniform rate in which the number of thunderstorm days decreased from south to north over the Atlantic coast and interior valley districts and their infrequent occurrence along the Pacific coast.

RELATIVE HUMIDITY.

Over the Atlantic coast and Gulf districts the relative humidity averaged somewhat less than the normal for the year, while over the remaining districts it was generally in excess of the normal.

Over the Rocky Mountains and Plateau districts the excess ranged from 5 to 15 per cent, a condition which prevailed over portions of the districts during each month of the year.